

4.0 Environmental Commitments

This section provides a summary of the proposed mitigation measures for Alternative 2 – Reconstruction of Existing Alignment (Proposed Project). Proposed mitigation measures will be implemented as part of the Proposed Project to ensure effects to resources are avoided or minimized. These commitments will be incorporated into Proposed Project design or implemented during construction and/or operation and maintenance of the Proposed Project and are described below.

4.1 Permits

Environmental commitments include permits and approvals, as well as proposed mitigation.

Implementation of the No Action Alternative would not require acquisition of permits or implementation of mitigation. The following is a discussion of permits that would be acquired and implemented for the Proposed Project.

4.1.1 Permits and Approvals

The FHWA would be responsible for obtaining all permits and approvals for Segments 2, 4, and 5 of the Proposed Project. Trinity County would be responsible for the permitting for Segment 3. Conditions of all permits would become requirements of the contracts issued by the FHWA or Trinity County for construction of the Proposed Project. Final compliance with the conditions of all issued permits would be the responsibility of the FHWA or TCDOT Project Engineer.

Permits required for implementation of the Proposed Project may include, but are not limited to, the following:

- CWA, Section 402, NPDES permit – California State, North Coast Regional Water Quality Control Board. A NPDES permit would be required to regulate stormwater discharge during project construction. This would require preparation and implementation of a SWPPP.
- CWA, Section 401 Certification (water quality) – California State, North Coast Regional Water Quality Control Board. A Section 401 Certification may be required because the Proposed Project may involve the discharge of fill materials into Waters of the United States, including wetlands. Certification would be required to ensure the project would not result in any discharge that would cause or contribute to a violation of State water quality standards.
- CWA, Section 404 permit – USACE. Implementation of the project may result in the removal of 0.096 ha (0.24 ac.) of jurisdictional wetlands and 0.204 ha (0.50 ac.) of Other Waters of the United States. Since the Proposed Project will result in discharge of fill to jurisdictional waters, the Proposed Project will require an individual Section 404 permit

from the USACE. The FHWA and Trinity County will also mitigate, as applicable, unavoidable effects to jurisdictional waters affected by the Proposed Project.

- CDFG has waived permit jurisdiction Section 1601 Streambed Alteration Permit on waters of the state on projects constructed by the FHWA. However, TCDOT will be required to obtain a 1602 Streambed Alteration Agreement for rock slope protection, culvert replacement and bridge pier augmentation in Segment 3. The County will also need an Incidental Take Permit from CDFG under Section 2081 of CESA for take of the Trinity Bristlesnail. The permit will require “full mitigation” of impacts to the snail, which will be implemented in accordance with the County’s Mitigation Plan (May & Associates 2002a).
- USFS Special Use Permit for staging areas and for road realignment outside the existing DOT Easement.
- An authority to construct (ATC) and a permit to operate (PTO) from the NCUAQMD will be required for the construction and operation of the batch plants, and the use of the rock crusher as well as other stationary construction equipment. A Use Permit may be required by Trinity County Planning Department, if batch plants or rock crushers are located on non-federal lands.
- Other State or local permits, such as use permits for off-site rock sources or processing operations, if any; staging areas; and transportation permits for oversize or overweight loads– Trinity County and Caltrans.
- Roadway right-of-way easements to TCDOT for maintenance of roadway improvements -- USFS.
- An explosives Permit may be required by California Health & Safety Code, Section 12101.
- Also, a Business Plan may be required consistent with Chapter 6.95 of the California Health & Safety Code for storage of over 500 pounds of hazardous materials for the temporary concrete batch plant.
- An encroachment permit will be required for any advance warning signs placed on Highway 3 – Caltrans.

Also, temporary right-of-way easements for construction may be required for activities that affect private property. Permanent right-of-way will be obtained from private property owners by TCDOT.

4.2 Summary of Mitigation Measures

4.2.1 Social and Economic Conditions

4.2.1.1 Construction Phase

Social and Economic 1

A Construction Management Plan (described in Section 3.14 of this EA) will be developed to include public information and provisions for emergency services. A public information element will be developed and implemented by a public information manager with responsibility for maintaining communication with affected residents and the local government and public services in offering advanced notice of upcoming construction activities and the effects of those activities. The public information manager will maintain regular communication with the engineer and the contractor, and will be well versed on all aspects of the construction schedule. A public information plan should address both information distribution to local and tourist communities including a web site, web link connections from tourist web sites, hotlines, roadside signs, construction schedule fact sheets and particular outreach to businesses, delivery services, local residences, and emergency service providers. The public information element will include a description of communication methods, lists of ambulance, fire, sheriff, school delivery services, post office and public utilities districts' contacts, newspapers, and frequency of coordination with concerned members of the community and businesses.

Social and Economic 2

The Project Engineer and Construction Contractor will coordinate closely with emergency service providers before and during construction. An Emergency Services Plan (which will include a Fire Plan) will be developed between the FHWA, Contractor, TCDOT, USFS, Hayfork Fire District, Hyampom Community Services District, Trinity County Sheriff's Office and Trinity Ambulance Service. The plan will establish lines of communication so that the construction crew receives notification of an emergency need to open the road prior to the arrival of emergency vehicles at the site. Procedures will also be established to keep emergency service providers advised of the location of construction crews, the activities going on at the time and the estimated time to clear the road for each activity. Communication will also include current information on the status and passability of alternate routes. The emergency service providers will use this information to determine the fastest way to reach the emergency site under the present circumstances.

Social and Economic 3

The Fire Plan will at minimum require that the Contractor have a serviceable telephone, radiotelephone or radio system connecting each construction operation with the Contractor's headquarters. The communication system will provide prompt and reliable communications between the Contractor's headquarters and USFS via commercial or USFS telephone. The communications system will be operable during Contractor's operation in the fire precautionary period and at the time fire patrol service is required.

Social and Economic 4

Additionally, the public information manager, further described in Section 3.14, will be responsible for providing up-to-date road closure information to the general public, especially Hyampom residents, business owners, and delivery service providers. Road closure information, including closure times and locations, will be provided by signs posted at the work site, at each end of Hyampom Road and at major intersections. The schedule will also be posted in various locations in Hyampom and Hayfork, published in the local newspaper, posted on the internet, and/or mailed to post office boxes in Hyampom and Hayfork. The information would also be available by calling the public information manager or the TCDOT office in Weaverville.

4.2.1.2 Operation Phase

Over the long term, the Proposed Project will result in an economic benefit to the local economy. No mitigation measures regarding Social and Economic Conditions and Environmental Justice are required.

4.2.2 Air Quality

4.2.2.1 Construction Phase

Air Quality 1

The Proposed Project will comply with all applicable NCUAQMD rules and regulations.

The following methods to reduce fugitive dust emissions are recommended under Rule 430 by the NCUAQMD:

- Cover open-bodied trucks when used for transporting materials likely to give rise to airborne dust.
- Use water or other dust suppressants for control of dust in construction operations, grading of roads, or the clearing of land.
- Apply water or other dust suppressants on dirt roads, material stockpiles, and other surfaces which can give rise to airborne dust.
- Promptly remove earth or other material from paved streets onto which earth or other material have been transported by trucking or earth moving equipment, erosion by water, or other means.

Other measures to address dust suppression will include:

- Restrict speeds of vehicles in and around construction activities.
- Frequently water disturbed, unpaved surfaces or other forms of dust suppressants.
- Control dust from material storage piles by spraying with water or dust suppressants.
- Minimize the disturbed area and the time between initially disturbing the soil and revegetating or other surface stabilization.
- Water active grading as appropriate during dry season.

- Cover all trucks hauling dirt, sand, silt, or other loose materials or maintain at least 15 cm (6 in.) of freeboard.

To mitigate emissions from heavy equipment operation, construction vehicles will be kept in proper running condition and operated to reduce equipment idle time. The short-term air quality effect from construction will be minimized with the implementation of these mitigation measures.

4.2.2.2 Operation Phase

No mitigation is proposed for the operational phase of the Proposed Project.

4.2.3 Noise

4.2.3.1 Construction Phase

Noise 1

The Proposed Project would be required to adhere to the Caltrans or equivalent FHWA standard specifications with respect to construction noise, which would decrease the potential for adverse noise effects. These standard specifications include the following provisions:

- The Contractor shall comply with all local sound control and noise level rules, regulations, and ordinances which apply to any work performed pursuant to the contract.
- Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

Provisions will be included in the plans and specifications requiring the contractor to make every reasonable effort to minimize construction noise at the receptors through abatement measures such as work-hour limitations. There will be no night-time work that involves blasting or other percussive construction activities that could affect residents. Other mitigation measures include no work on Sundays and holidays and ensuring equipment is adequately maintained and muffled. In addition, the contractor will notify the affected residents and the project engineer prior to any scheduled use of unusually loud equipment such as pile driving, blasting and rock drills.

In order to reduce the impacts to the NSO the following restrictions will be included in the contract specifications:

Restricted Activity	Distance from NSO Nest	Dates of Restriction
Activities that cause noise above 90 dBA	0.4 km (0.25 mi.)	March 1 to June 30
Nighttime construction (½ hour before sunset to ½ hour after sunrise)	0.8 km (0.5 mi.)	March 1 to July 31
Blasting	1.6 km (1 mi.)	March 1 to September 30

4.2.3.2 Operation Phase

There are no predicted effects; therefore, no mitigation measures are required.

4.2.4 Jurisdictional Wetlands

4.2.4.1 Design Phase

Wetlands 1: Avoidance of Impacts to Jurisdictional Waters

Throughout the preliminary design phase, FHWA and the County have refined the Proposed Project limits to avoid discharge of fill into jurisdictional waters to the maximum extent practicable. As part of the final design, FHWA and the County will continue to explore options for modifying the Proposed Project impact boundaries to further reduce impacts to jurisdictional waters.

4.2.4.2 Construction Phase

Wetlands 2: Avoidance and Minimization of Jurisdictional Waters Minimization of Effects to Jurisdictional Waters

Section 404 permits under the Clean Water Act will be required prior to construction. The following mitigation would be implemented at the Proposed Project site during construction activities to avoid and minimize direct effects to jurisdictional waters:

- Conduct activities across drainage features during the dry season (May 1 to October 31).
- Where possible, minimize long-term impacts on woody riparian vegetation by trimming trees and shrubs rather than removing entire woody plants or by cutting trees or shrubs at least 0.3 m (1 ft.) above ground level to leave root systems intact and allow more rapid regeneration following construction.
- Place silt fences or other erosion and sediment control devices at the toe of the constructed embankments to prevent sediment disturbed during ground-disturbing activities from being transported and deposited outside of the construction zone.
- Locate waste sites such that they do not drain directly into wetland features, to the fullest extent possible. If a waste site drains into a wetland feature, sediment basins or other erosion and sediment control devices would be constructed to intercept sediment before it reaches the wetland feature. Waste sites would be flattened and mulched to reduce the potential for erosion.
- Store equipment and materials away from all wetland features. Maintenance and fueling will be conducted in an area at least 7.6 m (25 ft.) away from waters of the United States, including Hayfork Creek, and fueling activities from permanent stations will be conducted within a containment area; otherwise, fueling will be conducted from fuel trucks on road surfaces (e.g. in steep areas along Segments 4 and 5).

Wetlands 3: Erosion and Sedimentation Control

During construction of the Proposed Project, erosion control measures (i.e., hydroseeding) will be implemented in non-riparian upland areas.

Erosion control work will consist of application of erosion control materials within non-riparian upland areas and approach fills, embankment slopes, excavation slopes, and other areas disturbed by grading. These materials will consist of fiber, native grass and forb seed,

commercial fertilizer, and water. Additional erosion control measures that will be implemented include:

- An Erosion and Sediment Control plan will be prepared and included in the final construction plans.
- Any construction activities proposed within the ordinary high water line of a water of the United States, excluding passive vegetation removal activities above ground level (no soil disturbance), will be restricted exclusively to the dry season (May 1 to October 31) or will be separated from the water of the United States by a cofferdam or other appropriate control measure.
- Ground-disturbing activities will be restricted to the dry season, which is defined as May 1 to October 31. Ground-disturbing activities may occur outside the defined dry season based on a forecast of dry weather and permission from National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries). Permission may be granted by email. Ground disturbing activities will not take place when the ground is saturated.
- Temporary erosion and sediment control structures must be in place and operational at the end of each construction day and maintained until disturbed ground surfaces have been successfully revegetated.
- Erosion control (i.e., hydroseeding, geofabrics, and mulch) will be applied to areas where vegetation has been removed to reduce short-term erosion prior to the start of the rainy season. Soils will not be left exposed during the rainy season.
- Silt fences and/or sediment basins or other erosion and sediment control devices will be placed below all construction activities between the construction area and Hayfork Creek and all perennial and intermittent streams to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities.
- After construction is complete, waste sites will be graded and vegetated to reduce the potential for erosion.
- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until the disturbed areas have been revegetated in accordance with National Pollutant Discharge Elimination System (NPDES) permit conditions.

Wetlands 4: Accidental Spills

Construction specifications will include the following measures to reduce potential effects associated with accidental spills of pollutants (i.e., fuel, oil, grease, etc.) to vegetation and aquatic habitat resources within the Action Area:

- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of materials. Maintenance and fueling will be conducted in an area at least 7.6 m (25 ft.) away from waters of the United States, including Hayfork Creek, and will be conducted within a containment area.

- Spill containment booms will be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.

4.2.4.3 Operation Phase

Wetlands 5: Replacement of Jurisdictional Waters

A conceptual Wetlands Mitigation and Monitoring Plan (WMMP) will be prepared and provided to the USACE for review and approval as part of the permit process. The WMMP would identify mitigation areas that are available and capable of maintaining self-sustained wetland hydrology and supporting hydrophytes without irrigation once established. It would identify varieties of plants to be established and the monitoring parameters and performance criteria for each parameter. Typical performance criteria may include:

- The target number of hydrophytic plant species to be established in the mitigation area will be the average number of obligate, facultative wetland, and facultative species¹⁰ that occur in adjacent reference wetlands. Reference wetlands will be identified in consultation with the USACE.
- The percent cover of obligate, facultative wetland, and facultative species within the mitigation area will not be less than 80 percent of the average percent cover occurring in the reference wetlands.
- Water depths, periods of inundation, and soil saturation in the mitigation area will be similar to conditions occurring in the reference wetlands.
- If the performance criteria are not satisfied by the end of the third spring following construction of the mitigation area, remediation measures will be identified and implemented. The monitoring program would, at a minimum, consist of the filing of an annual report to the USACE for 3 years. The mitigation would be considered successful when criteria are met for 3 consecutive years. USFS would maintain the mitigation site after the mitigation is successful.

4.2.5 Water Resources

4.2.5.1 Construction Phase

The following BMPs will be employed to avoid or minimize the potentially adverse effects of project-related erosion, sedimentation, elevated water temperatures, and pollutant loading.

¹⁰ Facultative Plant - Those plants defined as having an estimated probability of occurring in a wetlands 33 to 67 percent of the time. Examples in project area include the big leaf and vine maple, Pacific dogwood, California blackberry.

Facultative Wetland Plant - Those plants defined as having an estimated probability of occurring in a wetlands > 67 percent to 99 percent of the time. Examples in project area include the white alder, willow, black cottonwood.

Obligate Wetland Plants - Those plants defined as having an estimated probability of occurring in a wetlands > 99 percent of the time. Examples in project area include the cattail and spike rush.

Water Resources (BMP)-1 (SWPPP)

The Proposed Project will require the preparation of a SWPPP, or similar plan, to define measures to be implemented by the construction contractor to mitigate project-related stormwater and point source pollution to project site waterways. The plan is part of the North Coast RWQCB NPDES permit program.

Water Resources (BMP)-2 (Sedimentation)

Major ground disturbing activities will be completed within the non-rainy season (May 1 to October 31) to avoid stormwater sedimentation and turbidity effects to Hayfork Creek and its tributaries. Major ground disturbing activities may occur outside the defined dry season based on a forecast of dry weather and permission from NOAA Fisheries. Permission may be granted by email. Ground disturbing activities will not take place when the ground is saturated.

Water Resources (BMP)-3 (Sedimentation)

Temporary erosion and sediment control structures must be in place and operational at the end of each construction day and maintained until disturbed ground surfaces have been successfully revegetated.

Water Resources (BMP)-4 (Sedimentation)

All instream work should be conducted from the top of bank or existing road surface where feasible. Instream work will require the preparation of a dewatering plan.

Water Resources (BMP)-5 (Sedimentation)

The contractor will keep on site at all times straw bales, straw wattles, silt fencing, or other similar sediment control materials. Exposed soils will be covered with erosion blankets, straw, hydromulch, or similar ground-covering materials as soon as feasible to control wind and water erosion of exposed soils and prevent sedimentation to aquatic habitats.

Water Resources (BMP)-6 (Sedimentation)

Revegetation efforts will begin as soon as feasible after completion of grading and before predicted rains or the rainy season.

Water Resources (BMP)-7 (Temperature)

Avoid all unnecessary removal of vegetation. Limit vegetation removal to only those areas where such removal is necessary for project completion.

Water Resources (BMP)-8 (Temperature)

Riparian vegetation removed during construction will be replaced as soon as feasible following task or project completion.

Water Resources (BMP)-9 (Pollutants)

Equipment staging areas will be designated for all fueling, storing, and washing/cleaning activities. Staging areas shall be located a minimum of 7.6 m (25 ft.) distant from aquatic habitats or water resources of the Project Vicinity.

Water Resources (BMP)-10 (Pollutants)

The contractor will keep at the Project site at all times emergency spill response supplies such as absorbent materials (pads, booms), materials for constructing barrier or coffer dams (to contain aquatic spills), and similar materials. The contractor will have employees trained in spill response on site during all construction activities.

Water Resources (BMP)-11 (Pollutants)

No wet concrete, drilling muds, or similar substances will contact water resources of the Project Vicinity. Concrete effluent or slurry will be isolated from flowing water by coffer dams or stream diversions. Waste (used) drilling muds will be pumped to holding tanks for storage or disposal at an approved facility. Settling basins or similar concrete washout areas will be constructed for the purpose of isolating and stabilizing wet concrete slurry or effluent.

Water Resources (BMP)-12 (Fish Resources)

If drafting of water from Hayfork Creek or other surface water drainages in the Project Vicinity is conducted, the contractor will implement mitigation measures and practices found within two guidance documents:

- “Water Drafting Specifications” (NOAA 2001), and
- “Guidelines for Temporary Water Drafting from Watersheds Supporting Anadromous Salmonids; Special Application for Timber Harvest Activities” (CDFG 2001)

4.2.5.2 Operation Phase

No mitigation is proposed for the operational phase of the Proposed Project.

4.2.6 Biological Resources: Threatened, Endangered, and Sensitive Species

4.2.6.1 Construction Phase

Mitigation measures implemented to protect listed species also protect or provide mitigation for species that are not currently listed but may be listed in the future, or that may have recreational, social, or commercial values. Biological mitigation measures for the Proposed Project are intended to avoid, minimize, or compensate for adverse impacts to special-status species, so that their continued survival is not jeopardized.

The following sections describe the mitigation measures proposed to avoid, minimize, or compensate for potential impacts to biological resources. The measures are grouped and presented as general measures by the following categories: measures for plant species; aquatic habitat and associated special-status species; and upland habitat and associated special-status species.

Mitigation measures for special-status species are further discussed in detail in the BA for Segments 2, 4, and 5 (CH2M HILL 2004f) and the Biological Evaluation and Essential Fish Habitat Assessment (EFHA) for Segment 3 (May 2004a).

Biological Resources 1: General Measures

The following includes general BMPs and mitigation measures intended to avoid adverse impacts throughout the Project Vicinity:

- Establish clearly identified construction zone limits.
- Pesticide and herbicide use is prohibited by County ordinance.
- Litter will be disposed of in secure containers.
- Smoking will only be allowed in vehicles or in cleared and designated areas.
- There will be no feeding or intentional disturbance of wildlife.
- All hazardous material spills will be reported and cleaned up immediately.
- There will be no discharge of water into unapproved areas.
- Erosion control measures will be in place in all work areas.
- Fluid spill containment and clean-up materials will be readily available.

Biological Resources 2: Measures for Special-Status Plant Species

Revegetation of cleared areas will be performed with native plant species. For those USFS sensitive plant species observed along Segment 3, the following mitigation measures will be incorporated into the project construction:

- Potential impacts to the clustered (Brownie) lady's slipper will be reduced by a focused survey prior to construction to determine the precise location of the population presence; if this species is likely to be disturbed by construction, the James Creek bridge design will be modified to avoid this plant species and the population shall be clearly demarcated with construction barrier fencing; if avoidance is not feasible, the entire population will be transplanted to another suitable location on James Creek in consultation with a USFS botanist.
- Potential impacts to the Canyon Creek Stonecrop will be reduced by fencing the known population with construction barrier fencing and avoiding these areas during construction.
- Potential impacts to the Nile's madia will be reduced by scheduling construction within the vicinity of the plants after seed set (i.e. mid-July through October) and stockpiling soil in order to preserve the madia seedbank for reapplication after construction is complete. Reapplication of the madia seedbank should occur prior to the onset of fall rains.

Biological Resources 3: Measures for Aquatic and Riparian Habitat and Associated Special-Status Wildlife Species (Fish, Amphibians, Reptiles and Invertebrates)

The following mitigation measures will be incorporated into the construction design and schedule to reduce adverse impacts to aquatic-associated species and their habitat. These species include SONCC coho salmon, Chinook salmon, steelhead, foothill yellow-legged frog, tailed frog, and northwestern pond turtle.

- All BMPs from Section 3.8.5.1 will be followed.

- Restrict work in aquatic and surrounding riparian habitat to the dry season (May 1 to October 31) in order to reduce interference with the breeding season of frogs, salamanders, and fish.
- Erosion control measures will be installed to prevent discharge of sediments into aquatic habitats.
- If water diversion or water drafting is necessary, it will be done according to NOAA Fisheries and CDFG Guidelines. Inflow pumps will be fitted with screens to prevent intake of wildlife, and drafting will not exceed 10 percent of the base flows.
- Equipment will not be parked or stored overnight within 7.6 m (25 ft.) of an aquatic resource.
- Equipment fueling or maintenance activities will not occur within 7.6 m (25 ft.) of an aquatic resource.

The Proposed Project will disturb invertebrate habitat within riparian areas. The following mitigation measures will be incorporated into the construction design and schedule to reduce adverse impacts to the invertebrate species including Trinity bristle snail and associated habitat.

- All BMPs from Section 3.8.5.1 will be followed.
- Forest duff, downed logs, and limbs will be salvaged from select locations during construction and stockpiled for restoration. Following construction, this material will be placed in appropriate areas of temporary disturbance. Such ground cover will likely replace some of the species habitat removed during construction.
- With respect to potential impacts to the Trinity bristle snail, Trinity County is subject to CESA and will get an Incidental Take Permit and fully mitigate for Segment 3 impacts (May & Associates 2002c).

Biological Resources 4: Measures for Upland Habitat and Associated Special-Status Wildlife Species (Birds and Mammals)

The following measures will be implemented by the Proposed Project to reduce adverse impacts to bird species using upland habitat:

- Implement pre-construction surveys for the NSO and bald eagle in the year of construction or the year immediately prior to the beginning of construction.
- All construction equipment will be properly muffled.
- In order to reduce the impacts to the NSO the following restrictions will be included in the contract specifications:

Restricted Activity	Distance from NSO Nest	Dates of Restriction
Activities that cause noise above 90 dBA	0.4 km (0.25 mi.)	March 1 to June 30
Nighttime construction (½ hour before sunset to ½ hour after sunrise)	0.8 km (0.5 mi.)	March 1 to July 31
Blasting	1.6 km (1 mi.)	March 1 to September 30

- Other disruptive activities can be defined as any activity sustained for such a period or at such an auditory volume that might cause a breeding pair to abandon an established nest area or otherwise compromise the breeding season effort. At this time, there are no known nest sites within 1.6 km (1 mi.) of the Action Area.
- Limit ground disturbing activities to the minimum necessary to construct the Proposed Project. Tree removal will be kept to a minimum, and large snags and old growth trees that do not pose a risk to the safety of motorists (greater than 75 cm [30 in.] diameter-at-breast-height) will especially be avoided if possible.
- Variable sized woody debris will be salvaged from select locations and stockpiled during construction and later placed in large flat ravine fill areas, providing potential cover for NSO prey.
- Remove all trees during the non-nesting season (August 1 to January 31) to avoid take of eggs or juvenile birds. Trees may be removed during the breeding season if current year surveys indicate any of the following conditions are true: 1) there are no occupied nests, 2) nesting was initiated but failed, or 3) nesting was successful, and fledglings have moved to a point greater than 0.4 km (0.25 mi) from the proposed clearing activities.

The following measures will be implemented by the Proposed Project to reduce adverse impacts to mammal species such as the Pacific fisher and mice (which are a prey species for NSO) that are supported by upland habitat:

- Forest duff, downed logs, and limbs will be salvaged from select locations during construction and stockpiled for restoration. Following construction, this material will be placed in appropriate areas of temporary disturbance. Such ground cover will likely replace some of the species habitat removed during construction.

4.2.6.2 Operation Phase

No mitigation is proposed for the operational phase of the Proposed Project.

4.2.7 Cultural Resources

4.2.7.1 Construction Phase

Cultural Resources 1

Consultation on the eligibility of the Segment 4 prehistoric site is ongoing. If the site is determined to be eligible, appropriate mitigation measures will be developed in consultation with the SHPO and implemented prior to construction.

The Nor-Rel-Muk Nation will also be notified of the construction schedule, and invited to visit the site prior to construction to view the Proposed Project limits. If construction is to occur in areas considered by the Nor-Rel-Muk Nation or Wintu Cultural Council to be likely to contain burials or other archeological resources, then the Nation or Council may assign a representative to monitor construction in that vicinity, at their own expense.

In the event that previously unidentified cultural or paleontological resources are encountered during construction, there will be no further excavation or disturbance of that area. The contractor will avoid the materials and their context. The FHWA or County Project Engineer will be notified immediately. A qualified archaeologist will evaluate the find to determine its historical or archaeological eligibility. If the find is determined to be an eligible historical or archaeological resource, the archaeologist will make recommendations for appropriate mitigation. Work in the area will not resume until the mitigation measures recommended by the archaeologist have been implemented.

In the event that previously unidentified evidence of human burial or human remains are discovered, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains. The Trinity County Coroner must be informed and consulted, per state law. If the coroner determines the remains to be Native American, he or she will contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission will identify the person or persons it believes to be the most likely descendent. They will be given an opportunity to make recommendations for means of treatment of the human remains and any associated grave goods. Work in the area will not continue until the human remains are dealt with according to the recommendations of the County Coroner, Native American Heritage Commission, and/or the most likely descendent have been implemented.

4.2.7.2 Operation Phase

No mitigation is proposed for the operational phase of the Proposed Project.

4.2.8 Hazardous Materials

4.2.8.1 General Mitigation Measures

Hazardous Materials 1

The Proposed Project will mitigate any potential adverse impacts by complying with the requirements of applicable laws, ordinances, and regulations and by applying design, construction, and operational BMPs that will be protective of the environment. The BMPs are addressed in further detail within Section 4.2.4.1 (Water Resources). These BMPs will include but not be limited to:

- Concrete effluent or slurry will be isolated from flowing water by cofferdams or stream diversions.
- Concrete washout areas will be constructed.
- Equipment staging areas will be designated for all fueling, storing, and washing/cleaning activities. Where possible, staging areas will be located a minimum of 7.6 m (25 ft.) distant from aquatic habitats or water resources of the Project Vicinity.
- Contractor will be required to conform to Chapter 6.95 of the California Health and Safety Code in developing a Hazardous Materials Business Plan for storing over 500 pounds of hazardous materials, as implemented by the Certified Unified Program Agency, Trinity County.
- When not in use, all fine grain (cement, sands) concrete and asphalt batch plant materials will be covered or contained to reduce air dispersal and rain runoff. Batch plants should be located a minimum of 30.5 m (100 ft.) from aquatic habitats or water resources of the Project Vicinity.
- All earthwork activities will be planned and conducted to minimize the duration that soils would be left unprotected. The extent of the area of disturbance necessary to accomplish the Proposed Project will be minimized. Exposed surfaces will be frequently sprayed with water to control dust.
- Areas where batch plants are located will be regraded to follow natural contours and revegetated.

4.2.8.2 Construction Phase

Hazardous Materials 2

During the construction phase of the Proposed Project, hazardous materials will be used and waste will be generated in small quantities.

General mitigation measures that may be employed during construction of the Proposed Project include:

- Dust suppression or watering in excavated areas and for storage piles as warranted.
- Removal of any contaminated soil encountered for off-site disposal at an appropriate facility.
- Fuel storage and vehicle refueling in spill containment areas.
- Protecting any fuel storage areas with secondary containment one and one-half times the size of the original container; storage areas will be surrounded with a berm and lined with plastic or other impermeable barriers.
- Storage of materials and wastes in enclosed, secured areas.
- Spill control equipment onsite, sufficient to contain the capacity of the largest hazardous material container onsite.
- Provide portable sanitation facilities sufficient for the number of workers on site.

Mitigation measures with respect to the removal and replacement of Little Creek Bridge:

- To avoid the potential release of lead-based paint into the water or the environment during removal of the bridge, the metal portions of Little Creek Bridge will be segregated and hauled to a disposal site legally authorized to accept materials containing lead-based paint.
- There will be no on-site sand blasting for the bridge replacement.

Mitigation measures with respect to the repainting of Nine-Mile Bridge (Trinity County 2003b):

- To avoid the potential release of lead-based paint into the water or the environment during removal of the bridge, a containment system will be constructed around the bridge prior to sandblasting and painting.
- Debris catchment will be in place during replacement of this bridge to prevent lead-based paint chips from falling into the creek.
- Soil and air around the work area will be monitored to verify the effectiveness of the containment system.
- Lead-based paint chips and debris will be hauled to a disposal site legally authorized to accept materials containing lead-based paint.

Hazardous Materials 3

In addition, FHWA, Trinity County, or the construction contractor will prepare a SWPPP prior to commencement of construction activities for all hazardous materials used or stored on site and all wastes that may be generated during construction. For the management of unexpected spills during construction activities, the SWPPP will contain an Emergency Spill Containment Plan. The SWPPP will contain, at a minimum, the following:

- A description of all hazardous materials used on site
- Methods of managing each hazardous material
- Soil and water testing methods, if required
- Methods of transportation, storage, handling, and disposal of hazardous materials
- Disposal requirements and sites
- Recycling and waste minimization/reduction plans
- Emergency Spill Containment Plan

Hazardous Materials 4

Although there are no obvious instances of existing hazardous materials/waste apparent in the Project Vicinity, there are three residences and a storage shed in Segment 2 that may have had hazardous material spills, or used hazardous substances in relatively close proximity to the roadway. Segments 3, 4, and 5 did not have residences or storage sheds adjacent to the existing roadway. Due to the presence of such sites in the Project Vicinity, a Contingency Plan will be prepared to address the actions that will be taken during reconstruction of the roadway should unexpected contaminated soil or groundwater be discovered. The Plan will contain, at a minimum, health and safety considerations, handling

and disposal of wastes, reporting requirements, and emergency procedures. The Contingency Plan is similar to the Emergency Spill Containment Plan to be prepared for the SWPPP, but addresses the management of unexpectedly encountered contaminated soil or groundwater.

4.2.8.3 Operation Phase

No mitigation is proposed for the operational phase of the Proposed Project.

4.2.9 Visual Resources

4.2.9.1 Construction Phase

Visual Resources 1

Construction Phase

The design of the Proposed Project, particularly along Segments 4 and 5, includes aesthetic treatments to blend soil nail walls with the surrounding cut slopes and rock outcrops (see Figure 25).

When construction needs to cease for periods longer than three days, all equipment will be stored in staging areas, and the roadway and roadsides will be cleared of litter and unnecessary road building materials, such as concrete, rebar, and posts.

Once the construction in an area is complete, the area will be reseeded with native, non-invasive plant species. If in one year, vegetation has not established, then re-seeding will occur the following year. Riparian areas will be planted with starts along Hayfork Creek. Seeds and starts will conform to the Federal Seed Act, the Federal Noxious Weed Act and applicable State and local seed and noxious weed laws.

4.2.9.2 Operation Phase

No mitigation is necessary.

4.2.10 Invasive Species

4.2.10.1 Construction Phase

Invasive Species 1

Prevention/ Equipment washing: Construction equipment will be thoroughly washed before entering Trinity County, or if already residing in Trinity County, thoroughly washed before being transported onsite to reduce the risk of weed introduction into the Project Vicinity.

Invasive Species 2

Seed Requirements: In accordance with FHWA's "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects" (USDOT 2004) Section 713.04, all seed must conform to the Federal Seed Act, the Federal Noxious Weed Act, and applicable State and local seed and noxious weed laws.

Invasive Species 3

Prevention/ Weed-free material: The Proposed Project will require certified weed-free mulch and seed mixes.

4.2.10.2 Operation Phase

Invasive Species 4

Trinity County (the Department of Transportation, including Road Maintenance Crews and contractors hired by the County) is prohibited by County ordinance from using herbicides or other pesticides. Because Trinity County will assume long-term maintenance responsibilities for the roadway, they will continue to implement manual removal during spring roadway maintenance roadwork. Trinity County may engage in bio-agents (such as insects) or other methods for particular species of concern as determined necessary.

4.3 Construction

4.3.1 Construction Mitigation

For a complete description of the Construction Mitigation Plan, see Section 3.14.2.